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EFFECTIVE APPROACHES TO DEVELOPMENT OF STUDENTS' COGNITIVE ABILITY

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Annotation. The article deals with effective approaches to the development of students' cognitive activity. Special attention is paid to active learning technologies for enhancing the individual's internal resources to form students' cognitive ability.

Keywords: cognition, cognitive ability, cognitive activity, interdisciplinary approach.

The reproduction of an educated, intelligent, and brought up in a humanistic spirit society is the foundation of any state and the prospect of its development. In this regard, the formation of a modern specialist as a comprehensively developed personality is an important task of higher education, and it can be solved through the development of cognitive activity of students, future specialists. The doctrine of cognition originates from ancient times. Famous philosophers Aristotle, Socrates, Plato, F. Bacon, R. Descartes, G.V.F. Hegel, etc. contributed to the theory of cognition. Currently, the scientific work of such researchers of cognitive activity as Leontyev A.N., Halperin P.Y., Talyzina N.F., Luria A.R., Schukina G.I., Elkonin B.D. and others have won the recognition. Their findings have become the basis for continuing the study of cognitive activity in the learning process today.

There are a huge number of definitions of the term "cognitive activity". We will focus on one that defines it as a conscious activity aimed at cognizing the surrounding reality with the help of such mental processes as perception, thinking, memory, attention, speech.

What pedagogical conditions must be created in order to develop students' cognitive ability?

Firstly, training mustn't be localized within a single discipline. It must be interdisciplinary. Simultaneously several disciplines planned in a curriculum at the University get involved in the process of development of students' cognitive ability. Sirenko (2015) identifies two types of integration: horizontal and vertical.

A horizontal integration involves two or three disciplines to solve professional problems. It is complemented by a vertical integration; including all disciplines established in a curriculum. Horizontal and vertical integration helps students to form system thinking, integral vision of scientific, social and professional problems, and scientific world outlook. This contributes to the fact that the decision of professional problems will be based on professional and general scientific knowledge. Thus, interdisciplinary approach to training gets students ready for future professional activities, gives them a chance to form skills and abilities to withstand fierce competition for the workplace, and to achieve success in the future professional sphere.

Secondly, in order to intensify the cognitive activity of students in the process of learning, first of all, it is necessary to modernize the relationship between the participants of the educational process: teacher and student [3, p. 4]. The information-controlling function of a teacher, which leads to the formation of stereotype thinking and restrains students personality and professional growth [3, p. 4], should be replaced by the function of a manager in the educational process. This function involves the organization of the educational process. The teacher is accountable for the algorithm of doing tasks and monitoring the implementation of educational activities, motivation and encouragement during educational activities. He counsels students to make right decisions and is responsible for the result obtained at all stages of the educational process.

The authoritarian-directive style of management, which leads to the suppression of students' initiative and creativity in the learning process, should be replaced by a democratic one: cooperation and support of the student's activities for his personal and professional growth [3, p. 5].

Thirdly, the next condition for the activation of students' cognitive activity is modeling research activities in the professional sphere to cause students' cognitive needs. This can be achieved through the implementation of a personality-oriented approach in education. Using this approach a teacher becomes a consultant. He creates pedagogical conditions for the development of students' cognitive ability and personality qualities, necessary for future successful activity.

Fourthly, students' cognitive ability can be developed only in cognitive activity of students during their studies at the University. That's why cognitive ability is manifested in the form of cognitive performance. There are a variety of active teaching technologies that will enhance students' cognitive activity within interdisciplinary approach in education [3, p. 10]. Such technologies include project, gaming, interactive technologies, discussion technologies, analysis of specific situations, aimed at working with information and the formulation of proposals for solving problem situations, etc. [1, 3, p. 8 - 10, 4, 5].

Project technology is a leading interactive technology. It implies the integration of knowledge and skills from various fields of science and technology and causes the development of students' cognitive ability [2, p. 78]. An important condition for the implementation of interdisciplinary projects is the planning of the activities of teachers and students at all stages of interdisciplinary projects. For this, it is necessary to design methodological support for interdisciplinary

projects: modeling situations of real professional activity, indicating goals and tasks of professional activity for developing students' cognitive ability.

Business games are based on modeling professional activities of future specialists. Business faces a lot of problems. Some of them at first sight are not closely connected with business: the destruction of natural environment and climate change, the depletion of raw material and energy resources, demographic explosion and food shortage, environmental and social issues, but they play a great role in business success and need to be solved for sustainable development of a company. Business games, using the idea of integration of all disciplines established by the curriculum at the University, develop vital professional skills and cognitive ability of students in order to solve business problems in future.

The dialogue technique involves the exchange of views on the proposed business problems. The discussion is based on a contradiction aimed at critical thinking and demands information, knowledge and skills, obtained during the training process at the University [3, p. 8].

Analysis of specific situations in business occupies a special place among innovative pedagogical technologies. It is an effective means of combining theoretical and practical knowledge.

All these technologies activate the individual's internal resources on the basis of problems and cooperation, form analytical and cognitive ability, professional skills. They affect not only the cognitive component, but also affect the motivational - consumer sphere, activating the individual's internal resources for the cognitive activity necessary for a future profession [2, p.77].

The introduction of active teaching technologies into the educational process opens up new opportunities for stimulating students' cognitive activity. Based on many years of experience, the author can confidently say that the use of active teaching technologies in the educational process allows solving educational problems, optimally using information and educational resources, and providing comfortable conditions for students' personal and professional growth.

The cognitive activity of students is becoming one of the mandatory qualities necessary for a modern graduate of a non-linguistic university. It increases the possibilities of professional self-realization, introduces a specialist to the standards of world achievements. The development of students' ability cannot take place without the involvement of information technologies, which open up great didactic opportunities for the teacher and thereby fundamentally change the educational activity in which students are included. The potential for the use of information technology in the development of students' cognitive ability is great. Through the use of information resources, we contribute to the development of independent cognitive activity of students.

The desire of progressive teachers to improve the educational process through the use of new information technologies helps students expand their knowledge on their own. Students act as an active subject of cognition, focused on self-education, self-development in the context of future professional activity. Thus, through the use of information technology teacher stimulates independent cognitive activity of students.

Thanks to the use of IT-technologies in the educational process, a personality-oriented approach to learning is implemented, individualization and differentiation of learning is provided, taking into account the level of knowledge, skills, abilities and preferences of students. So, the joint efforts and aspirations of interested parties in the informatization of modern education will help to improve the educational process for the development of independent cognitive activity of students, thereby preparing competitive specialists who can successfully work in the field of their future profession.

The effectiveness of these approaches to the development of students' cognitive ability can be assessed by different education technologies. There is no doubt that assessment of cognitive abilities of students in the period of studying at the University is a complicated task. At present there are two approaches to this assessment at the University. The first one involves integrated multi-disciplinary control tasks simulating elements of professional activity. The second approach involves a traditional disciplinary examination and test tasks taking into account the contribution of each discipline.

Tools for assessing the level of cognitive activity of students are: exam, quiz, test, projects, laboratory works, internships, etc. Among effective education technologies for assessing independent cognitive activity of students a case – method takes a leading position. It makes possible to track the dynamics of the cognitive activity of students in the learning process, and to carry out a comparative analysis of the education.

Thus, sustainable development of a country requires graduates able to solve successfully business, scientific and applied problems. In this regard, the formation of a modern specialist as a comprehensively developed personality is an important task of higher education, and it can be solved through the development of cognitive activity of students, future specialists. The following pedagogical conditions must be created in order to develop students' cognitive ability:

- interdisciplinary approach to training,
- a personality-oriented approach in education,
- democratic style of management,
- active teaching technologies,
- modeling research activities in the professional sphere to cause students' cognitive needs,
- IT-technologies in the educational process.

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